

Spaceport News

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'NASA family' enjoys STS-114 Crew Return Celebration

By Jeff Stuckey
Editor

Rain failed to dampen the spirits of almost 2,000 Kennedy Space Center employees and their guests at the inaugural STS-114 Crew Return Celebration Nov. 1 at the Visitor Complex. KSC and 45th Space Wing employees and family members enjoyed an evening celebrating the historic accomplishments of the STS-114 mission and the successful return of its crew.

Mission Commander Eileen Collins and Mission Specialists Charles Camarda, Wendy Lawrence, Soichi Noguchi, Steve Robinson and Andrew Thomas

shared details about their historic return to flight mission during presentations at the Universe and IMAX Theaters. The astronauts also enjoyed talking to families, signing autographs and thanking employees for their dedication to America's space program. Pilot Jim Kelly was unable to attend.

"We are so proud of the employees here at the Kennedy Space Center," Collins said. "You've worked so hard on Atlantis, the first orbiter that was scheduled to fly mission 114 before it was changed to Discovery. You did a great job with them and, frankly, all the orbiters. We had an extremely

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STANDING ON the stage at the IMAX Theater in the Visitor Complex, STS-114 Commander Eileen Collins and Mission Specialists Charles Camarda and Soichi Noguchi give a presentation at the Crew Return Celebration on Nov. 1.

Florida Space 2005 at Visitor Complex features NASA's Griffin, space community

Florida Space 2005 is set for Nov. 15-17 at the Kennedy Space Center Visitor Complex, marking a fresh start in serving Florida's diverse space community that includes civil, commercial, national security and education sectors.

This new conference will build on the best features of Space Congress and the Cape Canaveral Spaceport Symposium, both longtime community space events now retired. The heritage of those two events will be honored at this inaugural conference conducted by the Space Foundation.

Space professionals from throughout the region and with interests in Florida will learn about current business opportunities, discuss relevant space policy and network with top experts from NASA's Kennedy

Space Center, the U.S. Air Force's 45th Space Wing and the Florida Space Authority.

Topics will include new work resulting from the nation's Vision for Space Exploration, assured access to space for

national security operations and overcoming challenges facing the commercial space sector in Florida. Visit

www.floridaspace.org/information/index.cfm for updated information.



NASA ADMINISTRATOR Mike Griffin (center), pictured with Center Director Jim Kennedy and first lady Laura Bush at the August launch of STS-114, will be one of the featured speakers at Florida Space 2005.

NASA Administrator Griffin, Center Director Kennedy to hold Nov. 16 all hands

Join NASA Administrator Mike Griffin and Center Director Jim Kennedy for an all hands meeting from 8:30 to 10 a.m. Nov. 16 in the Training Auditorium. The two will discuss NASA's progress with the Vision for Space Exploration, the status of the Space Shuttle Program and upcoming NASA events. Seating allotments for both NASA directorates and contractors will be distributed through administrative offices. Those who can't attend in person can watch the meeting on NASA TV, channel 7, or the KSC internal home page at <http://www.ksc.nasa.gov/nasa-only/internal.html>. People may also call in to ask questions on a phone line established and advertised during the broadcast.



Dr. Woodrow Whitlow Jr.
Deputy Director

The Kennedy Update

Hi, everyone! Jim took a well-deserved vacation this week, so I have the chance to write some words to our great work force, which is always a highlight for me.

First, I'd like to thank everyone for all the well wishes I've received since it was announced I will assume the duties as director of the Glenn Research Center in Cleveland in January. It will be tough to leave this great center and all the

wonderful people I've met and worked with the last couple of years, but I look forward to the new challenge. The one thing guaranteed about NASA is no two days are the same and there will always be a challenge awaiting you tomorrow.

I'd like to encourage everyone to attend the all hands meeting to be hosted by our Administrator Mike Griffin, along with Jim Kennedy, from 8:30 to 10 a.m. Nov. 16 at the

KSC training auditorium. It will be great to have Mike back in town and hear his perspective on where we stand on topics such as implementation of the Vision for Space Exploration and the status of the Space Shuttle Program.

Seating allotments for NASA and contractor employees will be distributed through normal channels, so let's have a super turnout. For those who can't make it, you can view it either on NASA TV or the Web, and there will be a call-in phone line set up for questions. See you there!

"I want to see everyone back here safe and sound for my last month at KSC so I can personally thank you for your support."

Mike Griffin also will speak at a first-of-its-kind conference, Florida Space 2005, that will be held Nov. 15-17 at the Debus Center. Many leading experts in the space industry will be here to present their views. Organizers

hope to grow this conference into one of the premier gatherings of space industry professionals each year. If you are attending, you will find it intellectually and professionally beneficial, as well as entertaining.

This is the last *Spaceport News* issue prior to Thanksgiving, and I want to be the first to wish everyone a wonderful holiday. More importantly, please don't stretch the limits of your endurance and make safe travel plans.

Remember, if you are traveling by automobile, don't try to drive too far in one day. I want to

see everyone back here safe and sound for my last month at KSC so I can personally thank you all for the support you've given to me and my family since my arrival in 2003. God bless everyone!

NASA Exploration trailer brings future space travel to workers today

By Linda Herridge
Staff Writer

Kennedy Space Center employees experienced a visual journey to the moon and Mars inside NASA's Vision for Exploration trailer during its three-day stop at the center Nov. 8-10.

Workers experienced the premiere of crew exploration vehicle footage during the introduction movie and then took a journey to the surfaces of the moon and Mars, and flew to Saturn's moon, Titan.

The interior of the second

room becomes a seamless floor-to-wall-to-ceiling window for a journey to otherworldly destinations. Surround vision screens let visitors experience what it would be like to live and work on the surface of the moon and Mars. Holographic video screens create floating images of moon rocks, stars and even colorful fish on an interactive floor that respond to hand and foot motions.

The traveling exhibit features updates on technologies being investigated and developed by NASA and industry, academia and other government agency partners.

The custom-designed and built trailer features 12 on-board projectors and 15 on-board computers with surround vision screens that create a two-part exploration experience. The trailer is 68 feet long, 28 feet wide and 13.6 feet tall.

The trailer is managed for NASA by Ai Signal

Research Inc., at Marshall Space Flight Center in Huntsville, Ala. The trailer's first road trip was to a Boy Scout Jamboree in August 2005.



THE NASA Vision for Exploration trailer visited the center Nov. 8-10.

November NASA Employees of the Month



THE NOVEMBER NASA Employees of the Month, sitting from left, include: Luis Berrios, External Relations; Cathy Remley, Center Operations; and Sean Black, Shuttle Processing. Standing in the back row, from left, are: Jose Camacho, International Space Station and Payload Processing; James Behling, Launch Services Program; and Ronald Long, Safety and Mission Assurance. Not pictured are: Diana Kniffin, Independent Technical Authority and Systems Management; Michelle Green, Launch Integration; and Marcus Orr, Procurement Office.

Work force mentors local disabled students

NASA partners with Space Coast Center for Independent Living

Kennedy Space Center provided local students and job seekers with disabilities an opportunity to spend a day with the NASA family on Nov. 8 in support of National Disability Employment Awareness Month.

Civil service employees and contractors served as mentors for the day, helping the students learn firsthand about different types of careers, make the connection between school and work, and target their career paths. NASA's partnership with the Space Coast Center for Independent Living brought the students and job seekers together from local community agencies.

The group met at the KSC Center for Space Exploration to receive a warm welcome and engage in an Exploration Station workshop. The students then headed to the work site of their assigned mentors for an enlight-

ening experience.

The event aimed to provide job-shadowing opportunities for those with disabilities. Its other goals included dispelling employers' concerns about hiring people with disabilities, and increasing confidence among people with disabilities.

Disability Mentoring Day is supported statewide by a collaborative effort between The Able Trust and the Florida Division of Vocational Rehabilitation, along with a Florida state planning committee. National Disability Mentoring Day began in 1999 as part of a White House effort to increase the profile of National Disability Employment Awareness Month, celebrated every October.

For information about the KSC Disability Awareness and Action Working Group, visit <http://www.ksc.nasa.gov/nasa-only/groups/daawg/index.htm>.



SUSAN KROSKEY (above), director of the Cape Canaveral Spaceport Management Office and executive advisor for DAAWG, talks to disabled students. At left, an employee mentors two disabled job seekers.

My Story

By Robert Donatto
Space Gateway
Support
hazardous waste



This column provides Kennedy Space Center employees a chance to tell their life's story. Readers are encouraged to submit a first-person article between 400 and 500 words. Talk about your family, career and most memorable experiences. A little bit about your career at KSC will be most interesting, as well. E-mail "My Story" submissions to Bruce.Buckingham-1@nasa.gov.

My story begins when I was a little boy, about seven years old. I remember standing in our front yard, pointing at the smoke coming from the back of an airplane very high in the sky. My mom said it was a jet. I was really amazed and said maybe one day I'll be high in the air like that.

After graduating from high school in 1968, I entered Gary Job Corps in San Marco, Texas, to take a brick-laying class. After a few weeks, I didn't have an interest in that, so I enrolled in a truck-driving course at Kilmer Job Corps Center in Edison, N.J.

I completed the light and heavy truck courses but did not

want to go through with the tractor-trailer course. So I took and completed a forklift operator's course, then decided to join the U.S. Air Force in April 1969.

I was ending my 20 years in the military when I was working part time as a security guard at the Langley Research Center next to Langley Air Force Base in Virginia. I put in a job application and to my surprise, I was called to work in Life Support at Kennedy Space Center. After talking it over with the family, we decided to come to Florida.

This is one of the first highlights of my life that I want to tell you about. When I first went up to work around the space shuttle and I took my first look under that engine, all the feelings I had as that six-year-old came back to me again. I said to myself, "So, this is what God had for me all these years." Not only was I looking at one of the

biggest engines I've ever seen, but my dreams as a young boy were more than I imagined.

I worked for Life Support until we had a layoff in 1997, then as a Certified Nursing Assistant until I was called back to work in 1998 and transferred to work in Hazardous Waste. To this day, this job has been the best I've ever had. You have a chance to not only help keep the environment safe, but also to let other people know what they can do to help. Labor and management work in the same trailer together as a team. We respect each other and because of the open communication we have, all matters are discussed in a professional manner.

Now for the second highlight of my story. Today, in order for me to do this job, every day I have to be able to drive that heavy truck and that forklift I was trained on in 1968. I thank God for guiding my path not only to a good job, but for preparing me years ago for what he wanted me to do this very day.

Employees and their families gather for fellowship

CELEBRATION. . . (Continued from Page 1)

successful flight and that is the message we're getting out. We want to thank all of you, the employees and the families, that worked so hard to make it happen."

Collins, along with crew members Camarda and Noguchi, presented a picture board memento to the employees and Center Director Jim Kennedy for his leadership during difficult times to get the shuttle program flying again. Its plaque reads: "To the employees of the Kennedy Space Center in appreciation for your work in Return to Flight," and includes part of the American flag which was flown on the spacecraft with the STS-114 crew.

According to Collins, the flag flew around the Earth 219 times, traveling more than 5 million miles at 17,864 miles per hour.

Kennedy and United Space Alliance's Bill Pickavance, president of Florida operations, told an audience at the IMAX

theater how proud they were of the work force's accomplishments from the mission.

"What we're doing tonight is pausing, as a group of KSC employees, to celebrate the tremendous success Eileen Collins and her crew accomplished on July 26 of this year," Kennedy said. "We also say thank you to the crew. We thank you for being great American patriots. To all of you in the audience, the KSC family, thanks for everything you do. We are a family that is 15,000 strong and we do this all together."

"We have an expression I'm particularly proud of, and it's 'KSC and proud to be.' On days like July 26, I felt that emotion particularly strong and I feel the same tonight as we celebrate the crew's successful return."

Pickavance acknowledged how proud his organization is to be a part of the great team at KSC.

"We are also extremely proud of the role we played to get Eileen and her crew back into space," he said. "This entire NASA and contractor team also

owes a great deal of debt to the families who put up with a lot of long hours, weekends and holiday work, so I would like to recognize that and thank all the kids and moms and dads who put up with those hours away."

"It enabled us, and Col. Collins and her crew, to get this nation back into space where we ought to be," Pickavance said. "One team, one mission. Thanks for everything you all did."

Along with entertaining presentations from crew members and senior management, attendees also enjoyed the new 3-D movie *Magnificent Desolation* at the IMAX II Theater, delicious meals from Orbit Cafeteria and New Frontier, and SpaceDots ice cream at the Milky Way station.

The RockIt band could not perform because of weather conditions, but talked to the crowd and signed autographs. Photo opportunities with the STS-114 crew and the Visitor Complex's Spaceman, and discounts on purchases at the Space Shop added to the fun.



AN ESTIMATED 2,000 people attended the STS-114 Crew Celebration at the Kennedy Space Center Visitor Complex. Crew members gave commentary on a film presentation and answered questions in both the IMAX and Universe Theatres. Astronauts Eileen Collins and Michael Smith also attended.



ON STAGE at the Universe Theater, STS-114 Mission Specialists Jim Kelly (left), Stephen Robinson and Wendy Lawrence answer employee and family member questions about their mission.

STS-114 Commemorative

By Jeff Stuckey
Editor

John Breaux, one of many U.S. Navy veterans who use the Brevard Veterans Affairs Outpatient Clinic in Viera, is proud of the facility's involvement with NASA.

The Palm Bay resident expressed his admiration for the nation's space program on Nov. 1 as he watched Kennedy Space Center Director Jim Kennedy and STS-114 Commander Eileen Collins dedicate the clinic's mental health wing as "Team Discovery."

"I've followed all of the NASA launches, including the day my wife and I got married," Breaux said. "We have footage of an Apollo launch as part of our wedding video. It was a crystal clear

Wish and crew presentations at Visitor Complex



ended the STS-114 Crew Return Celebration held Nov. 1 at the Visitor Center. The event featured a film presentation from their mission and answered audience questions. Astronaut Andy Thomas was unable to attend the event.



STS-114 MISSION Specialist Wendy Lawrence (far left) speaks to Kennedy employees in the Space Station Processing Facility while Mission Specialist Charles Camarda (left) listens. They and the other crew members visited several sites during their return to the center.

Commander Collins helps dedicate Brevard veterans clinic wing

day and I remember seeing the boosters falling down after the launch.”

Team Discovery joins three primary care units – Gemini, Apollo and Mercury – in addition to specialty clinics Endeavour and Saturn as wings at the clinic named after NASA programs and spacecraft. Construction of the 107,500-square-foot facility began in January 1998, followed by its opening in July 1999.

Kennedy, a veteran of the U.S. Air Force, acknowledged the hard work of the clinic’s staff.

“We are proud of so much that goes on at the Kennedy Space Center and our community,” he said. “First, we are very proud of our veterans and appreciate the service they give to this nation. As a Brevard County resident, I am

proud that we have a VA clinic that provides services to more than 19,000 veterans a year. And we are also proud you have chosen to name the various wings of your clinic after our successful space programs.”

Kennedy introduced Collins, also an Air Force veteran, who was honored by the clinic’s association with NASA.

“My retirement date is coming this month, so I feel like I will be part of a very distinct and honored group,” Collins said. “In fact, my father, two brothers and husband are also veterans of different military service, so I think that is part of what got me started in my military service, which was a great experience for me.

“Our veterans have done so much for the freedom of our country and I thank all of you for that,” she said. “The work

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CENTER DIRECTOR Jim Kennedy (far left) and STS-114 Mission Commander Eileen Collins (right of photo) present a photograph of the launch of Discovery to Dr. Thomas Howard, chief medical officer of the VA Outpatient Clinic in Viera. The presentation is part of the dedication of a hospital wing in honor of space shuttle Discovery, to be known as the Discovery wing.

Nation's space grant directors enjoy KSC tour

By Jennifer Wolfinger
Staff Writer

The Florida Space Grant Consortium supports expanding and diversifying Florida's space industry by providing grants, scholarships and fellowships to students and educators from throughout the state. To help achieve these goals, members joined at Kennedy Space Center on Oct. 27 for the 2005 National Council of Space Grant Directors Conference.

Approximately 140 participants represented each state in the nation, Puerto Rico and NASA Headquarters. The interaction between consortium award recipients and KSC supports research and projects that will be used in real-world space missions.

Upon arrival at the spaceport, participants visited the KSC Visitor Complex exhibits while consortium leaders attended board meetings. The group then gathered for lunch at the Debus Center.

Gregg Buckingham, chief of KSC's Education Programs and University Research Division, welcomed the participants and thanked the event's organizers.

Diane DeTroy, a NASA Headquarters program manager who distributes congressionally appropriated funds to the consortium's state directors, was also grateful for the opportunity.

"I've participated two to three times, but it's exciting every time," she said.

Mike Wetmore, Shuttle processing director, addressed KSC's recent and ongoing milestones, and recognized the relationship between NASA and the consortium.

The "Florida Space Grant Consortium is critical because of what you bring to NASA. You bring so much excitement, and it really pumps us up," he said.

He praised highlights including the Mars Reconnaissance Orbiter mission, five years of human occupancy on the International Space Station, the center's reorganization to support exploration, and improvements in technology.

"We returned to flight this year, and it was a tough two and a half years to get to that point," Wetmore said. "With the release of the Exploration Systems Architecture Study, we have a road map of where we're going and it's not just lower-Earth orbit."

Wetmore generously welcomed questions from the group and individuals after lunch.

Members were then treated to a showing of "Magnificent Desolation: Walking on the Moon," a new 3-D IMAX movie, which was followed by a bus tour of key KSC facilities and areas.

Participants concluded their event-filled day with dinner at the Apollo-Saturn V Complex.



MIKE WETMORE, Shuttle processing director, talks to members of the National Council of Space Grant Directors.

The consortium was formed in 1989 when NASA implemented the National Space Grant College and Fellowship Program. The voluntary association includes 17 Florida universities and colleges along with KSC, Florida Space Authority, the Astronaut Memorial Foundation, the Higher Education Consortium for Math and Sciences,

Florida's community colleges and the Orlando Science Center.

For KSC education information, visit www.nasa.gov/centers/kennedy/education/index.html. For details about the consortium, visit <http://fsgc.engr.ucf.edu> or www.nasa.gov/audience/foreducators/Space_Grant.html.

NASA, university group discuss future technology

NASA and contractor employees recently joined more than 40 researchers from universities throughout the country for the first Spaceport Research and Technology Institute workshop. They focused on two technologies important to Kennedy Space Center: nanosensors and self-healing materials. The consortium of universities supports applied NASA research and technology in Florida. Among those represented were Purdue, Minnesota, Lehigh, Georgia Tech, Florida, Central Florida and Florida Tech. Nanosensors and self-healing materials were highlighted for their potential at KSC in processing and launch site operations for future space systems.

CLINIC . . .

(Continued from Page 5)

the staff performs here not only helps the patients, but it is a great help for the families of patients who have needs in the medical area."

The clinic's chief medical officer, Dr. Thomas Howard, thanked Kennedy and Collins and acknowledged the important contributions of retired KSC employee Norris Gray, a World War II veteran and current NASA public affairs volunteer. "He remains actively engaged with

NASA as a public affairs volunteer and advocate," Howard said. "He's also a veterans' advocate who has knitted these two programs together and should be acknowledged for what he continues to do for both."

The Viera clinic serves Brevard, Volusia and Indian River Counties, which have more than 100,000 potential veteran patients. The clinic has affiliations with Holmes Regional Medical Center and Circles of Care, both in Melbourne, and other local community organizations.



STS-114 COMMANDER Eileen Collins autographs crew photos following the dedication of a hospital wing at the V.A. Outpatient Clinic in Viera.

Space station celebrates five years of human presence

Break out the thermostabilized beef tips with mushrooms and rehydratable apple cider! NASA celebrated a major space milestone Nov. 2 as the International Space Station clocked its fifth anniversary of continuous human presence in space.

Since Expedition 1 cosmonauts arrived on the scene in 2000 to stay awhile, the space station has grown and evolved into an unprecedented, state-of-the-art laboratory complex. Offering a microgravity environment that cannot be duplicated on Earth, the space station continues to further humankind's knowledge of science and how the human body functions for extended periods of time in space — all of which will prove to be vital on long-duration missions to Mars.

To date, 89 scientific investigations have been conducted on the space station and more breakthroughs are to come. New results from early space station research, from basic science to exploration research, are being published each month.

For instance, great strides have been made in understanding the significant rate of bone loss by crew members while in



IN THE Space Station Processing Facility, technicians prepare to install the Minus Eighty Degree Laboratory Freezer for the station's science rack into the multi-purpose logistics module Leonardo. Leonardo will fly on space shuttle Discovery on mission STS-121.

orbit, and the areas in the bones where the loss is occurring. Also, a complete characterization study of the radiation environment has been performed.

Everything from eating habits to nutritional deficiencies has been examined to see how it relates to the physiological effects of microgravity. New use of medical ultrasound equipment as a diagnostic tool and in-space soldering to repair potential hardware damage has also been tested on the space station. And that's only a tiny fraction of the

studies conducted so far.

Future journeys to Mars could take years to complete roundtrip, with little or no resupply opportunities, as well as limited cargo space. Repair techniques that are being perfected now could also be used during long-duration missions. Lessons taken from the space station during this period of heightened efficiency will help in planning for Mars missions later.

Along with serving as a science laboratory, the space

station has been something special for its crews: a home away from their home on Earth. During the upcoming five-year anniversary, the station will be home to its 12th crew, Expedition 12. Inside the ultra-modern "home," 15 Americans and 14 Russians have lived and worked aboard the space station.

With 15,000 cubic feet of habitable volume - more room than a conventional three-bedroom house - the space station affords many of the comforts one finds on Earth. There is a weightless "weight room" and even a musical keyboard alongside research facilities. Holidays are observed in many ways, including eating traditional foods such as turkey and cobbler - with lemonade to wash it down.

Space Shuttle Endeavour made the first U.S. trip to the space station when it delivered the Unity Node with two pressurized mating adapters on Dec. 6, 1998. The STS-88 crew captured the Zarya Control Module and mated it with the Unity Node inside the Shuttle's payload bay. On Dec. 13, Endeavour undocked from the young International Space Station for the return to Earth.

Remembering Our Heritage

35 years ago: Apollo back on the right track

The **Saturn V rocket for Apollo 14** was rolled out to Pad 39A on Nov. 9, 1970, a significant milestone in the lunar landing program schedule. The program team had been hard at work since April to make the Jan. 31 launch date.

Parallel to the initiative of the shuttle team today, many design improvements were required to correct the problems encountered on Apollo 13 when the service module oxygen tank ruptured.

The command and service module systems were modified to eliminate potential combustion hazards in all high-pressure oxygen containers. A third oxygen tank was added, one that could be isolated from the fuel cell and supply oxygen exclusively to the environmental control system in case of an emergency.

A lunar module descent battery was also installed in the service module as a backup to the main power supply.

Changes to the Saturn second stage were made to reduce the pogo effect experienced on Apollo 13, caused when systems oscillated in rhythm. A helium gas accumulator was installed in the liquid oxygen line of the center engine to lower the resonant frequency, as was a backup cutoff device to shut the engine down if the accumulator should fail.

Simplified two-position propellant utilization valves were also installed on all five J-2 engines to control the propellant mixture ratio to the engines, providing high thrust during the first part of the burn when the stage is the heaviest and lower thrust during the end of the burn for more efficiency.



Civil service employees donate record amount to Combined Federal Campaign

Civil servants at Kennedy Space Center set a record with their contributions to those in need during this year's Combined Federal Campaign, with 85 percent of the work force contributing more than \$433,000. This far exceeded the goal of \$325,000.

Those funds included a total of \$158,000 targeted for distribution to local charities, and more than \$19,000 donated to the NASA Family Assistance Fund.

Center Director Jim Kennedy was thrilled with the results and praised the work force for its generosity. "The KSC work force truly lived up to this year's campaign slogan, 'Launching Dreams of Those In Need,' " he said.

Campaign chairman Ray

Lugo said he was grateful for the overwhelming support and kindness.

"This continuing legacy of generosity of the NASA team in the Central Florida community is most certainly one to be proud of as we give to those in need," Lugo said.

The Combined Federal Campaign is an annual fundraising drive conducted nationally by federal employees in their workplace. Each year, federal employees and military personnel raise millions of dollars through the campaign that benefits thousands of non-profit charities.

The success of this year's campaign will be celebrated as part of the KSC Holiday Celebration 2005 on Dec. 16 at KARS Park I.

National Aeronautics and Space Administration



www.nasa.gov

<http://cfc.ksc.nasa.gov>

Sharing and caring through Make a Difference Day



EMPLOYEES FROM the Headquarters Building load a truck with needed supplies destined for the Brevard Sharing Center.

Make a Difference Day is an encompassing national day of helping others - a celebration of neighbors helping neighbors, and everyone can participate. The Federally Employed Women (FEW) Space Coast Chapter has participated in Make a Difference Day since 1996 with projects to help organizations such as Country Acres Children's Home, Pregnancy Crisis Center and Hacienda Girls Ranch. This marks the third year the Brevard Sharing Center has been chosen because of its vast needs, and the participation of the "family" at the Kennedy Space Center has been overwhelming. The FEW Space Coast Chapter put out the call to members and employees at KSC to fill boxes for the Sharing Center, and many civil servants and contractors responded individually and by office teams.

Mars robot expert from Jet Propulsion Lab to discuss rovers

A Mars robot expert will present a free public lecture for local families and students at 7 p.m. Nov. 19 at the Brevard Community College Astronaut Memorial Planetarium and Observatory, located on BCC's Cocoa Campus.

Julie Townsend of NASA's Jet Propulsion Laboratory was a key engineer on NASA's Mars Exploration Rover mission, and is currently working on future robot

missions to Mars and other planets.

Her multimedia presentation focuses on the technical challenges of operating robot rovers on other planets. She will describe her personal experiences, frustrations and triumphs in commanding rovers Spirit and Opportunity, which continue operating on Mars today.

For more information, call (321) 433-7372 or visit the Web site at www.brevardcc.edu/planet.



John F. Kennedy Space Center

Spaceport News

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